

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/000901

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C07D 417/12, C07D 417/14, C07D 401/04, C07D 403/04, C07D 403/14,
C07D 413/04, C07D 413/14, A61K 31/541, 31/54, A61P 11/00, 25/28, 25/00, 9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C07D, A61K, A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI-DATA, EPO-INTERNAL, PAJ, CHEM.ABS.DATA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Bioorganic & Medicinal Chemistry Letters, Vol. 13, Issue 13, 7 July 2003, A. Roderick MacKenzie et al: "4-Amino-2-(aryl)-butylbenzamides and Their conformationally constrained analogues. Potent antagonists of the human neurokinin-2 (NK2) receptor", pages 2211-2215 --	1-32
X	WO 0020003 A1 (ZENECA LIMITED), 13 April 2000 (13.04.2000) --	1-32
X	WO 0002859 A1 (ZENECA LIMITED), 20 January 2000 (20.01.2000) --	1-32

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

7 October 2004

Date of mailing of the international search report

02-12-2004

Name and mailing address of the ISA/
Swedish Patent Office
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/000901

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0625509 A1 (ZENECA LIMITED), 23 November 1994 (23.11.1994) --	1-32
A	WO 0034243 A1 (ASTRAZENECA UK LIMITED), 15 June 2000 (15.06.2000)	1-23, 25-32
X	--	24
A	EP 0630887 A1 (ZENECA LIMITED), 28 December 1994 (28.12.1994) --	1-32
A	WO 9727185 A1 (PFIZER RESEARCH AND DEVELOPMENT COMPANY), 31 July 1997 (31.07.1997) --	1-32
A	US 6013652 A (MACCOSS ET AL), 11 January 2000 (11.01.2000) --	24
A	WO 9610568 A1 (MERCK & CO., INC.), 11 April 1996 (11.04.1996) -- -----	24

INTERNATIONAL SEARCH REPORT

International application No.
SE2004/000901

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 28-29
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

Claims 28-29 relate to methods of treatment of the human or animal body by surgery or by therapy or diagnostic methods
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The International Search Authority considers that there are two inventions covered by the claims indicated as follows:

I: Claims: 1-32 directed to novel azetidine derivatives and the intermediate with formula (IV) for those compounds

.../...

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-23, part 24, 25-32

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
SE2004/000901

Box II.2

practiced on the human or animal body (PCT Rule 39.1(iv)). Nevertheless, a search has been executed for these claims. The search has been based on the alleged effects of the compounds or compositions.

INTERNATIONAL SEARCH REPORT

International application No.
SE2004/000901

Box III

mentioned in claim 24

II: Claim 24 directed to the intermediate with formula (VI) for those compounds mentioned in the claim

The ISA has carried out a partial search which relates to invention I mentioned above.

The applicant is invited to pay an additional fee for of the inventions II as listed above.

The present application has been considered to contain two inventions which are not linked such that they form a single general inventive concept, as required by Rules 13.1, 13.2 and 13.3 PCT for the following reasons:

Invention I relates novel therapeutical compounds with formula I, which are neurokinin-receptor antagonists and the intermediates with formula (IV) and (V).

Invention II relates to different intermediates.

In order to fulfil the requirements of unity of invention, it is necessary that the intermediate compounds are closely interconnected with the end products. Such close connection requires that the essential structural part of the end product is incorporated by the intermediate compound. However, the present application lacks a single general inventive concept based on the above principle. This leads to the presence of the subjects listed above, each falling under its own restricted inventive concept.

As both problems and solutions are technically so different, no single general concept can be formulated based on the technical features of the inventions. Consequently, the requirements of Rule 13.1 PCT are not met.

It was investigated under Rule 13.2 if any further features, either in the claims or derivable from the description, could be considered as a same or corresponding feature and which could be considered a special technical feature establishing a technical link between the (two) groups of inventions. In particular it was investigated if ... (eventuellt samband mellan de olika uppfinningarna).

No such features were identified.

Consequently, two groups of inventions are not so linked as to form a single general inventive concept as required by Rule 13.1 PCT.

INTERNATIONAL SEARCH REPORT

Information on patent family members

30/10/2004

International application No.

PCT/SE 2004/000901

WO	0020003	A1	13/04/2000	AT	230598	T	15/01/2003
				AU	4637899	A	01/02/2000
				AU	6111099	A	26/04/2000
				BR	9912013	A	10/04/2001
				BR	9914333	A	26/06/2001
				CA	2336806	A	20/01/2000
				CA	2344807	A	13/04/2000
				CN	1309638	T	22/08/2001
				CN	1322134	T	14/11/2001
				DE	69904847	D,T	02/10/2003
				EP	1097137	A	09/05/2001
				EP	1119355	A,B	01/08/2001
				SE	1119355	T3	
				GB	9821703	D	00/00/0000
				GB	9914886	D	00/00/0000
				GB	9922519	D	00/00/0000
				ID	24739	A	00/00/0000
				ID	25749	A	00/00/0000
				IL	140770	D	00/00/0000
				IL	142048	D	00/00/0000
				JP	2002520316	T	09/07/2002
				JP	2002526410	T	20/08/2002
				NO	20010151	A	05/03/2001
				NO	20011766	A	05/06/2001
				US	6365602	B	02/04/2002
				US	6500818	B	31/12/2002
				WO	0002859	A	20/01/2000
				ZA	200102658	A	01/07/2002
				GB	9905238	D	00/00/0000

INTERNATIONAL SEARCH REPORT

Information on patent family members

30/10/2004

International application No.

PCT/SE 2004/000901

WO	0002859	A1	20/01/2000	AU	4637899	A	01/02/2000
				BR	9912013	A	10/04/2001
				CA	2336806	A	20/01/2000
				CN	1309638	T	22/08/2001
				EP	1097137	A	09/05/2001
				GB	9814886	D	00/00/0000
				GB	9914886	D	00/00/0000
				ID	24739	A	00/00/0000
				IL	140770	D	00/00/0000
				JP	2002520316	T	09/07/2002
				NO	20010151	A	05/03/2001
				US	6365602	B	02/04/2002
				AU	767002	B	30/10/2003
				AU	6111199	A	26/04/2000
				BR	9915904	A	21/08/2001
				CA	2345133	A	13/04/2000
				CN	1322196	T	14/11/2001
				EP	1119551	A	01/08/2001
				EP	1433783	A	30/06/2004
				GB	9821699	D	00/00/0000
				GB	9922521	D	00/00/0000
				ID	25750	A	00/00/0000
				IL	142045	D	00/00/0000
				JP	2002526527	T	20/08/2002
				NO	20011765	A	07/06/2001
				NZ	510582	A	29/08/2003
				WO	0020389	A	13/04/2000
				ZA	200102651	A	01/07/2002
				AT	230598	T	15/01/2003
				AU	6111099	A	26/04/2000
				BR	9914333	A	26/06/2001
				CA	2344807	A	13/04/2000
				CN	1322134	T	14/11/2001
				DE	69904847	D,T	02/10/2003
				EP	1119355	A,B	01/08/2001
				SE	1119355	T3	
				GB	9821703	D	00/00/0000
				GB	9922519	D	00/00/0000
				ID	25749	A	00/00/0000
				IL	142048	D	00/00/0000
				JP	2002526410	T	20/08/2002
				NO	20011766	A	05/06/2001
				US	6500818	B	31/12/2002
				WO	0020003	A	13/04/2000
				ZA	200102658	A	01/07/2002
				GB	9909840	D	00/00/0000
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EP	0625509	A1	23/11/1994	CA	2123636	A	18/11/1994
				DE	69404549	D,T	18/12/1997
				GB	9310066	D	00/00/0000
				JP	3394819	B	07/04/2003
				JP	6340624	A	13/12/1994
				US	5521199	A	28/05/1996
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INTERNATIONAL SEARCH REPORT

Information on patent family members

30/10/2004

International application No.

PCT/SE 2004/000901

WO	0034243	A1	15/06/2000	AU	1667500	A	26/06/2000
				EP	1137637	A	04/10/2001
				GB	9826941	D	00/00/0000
				JP	2002531548	T	24/09/2002
				US	6403601	B	11/06/2002

EP	0630887	A1	28/12/1994	SE	0630887	T3	
				AT	182583	T	15/08/1999
				AU	673063	B	24/10/1996
				AU	6320394	A	15/12/1994
				CA	2124048	A	25/11/1994
				CN	1061977	B	14/02/2001
				CN	1098094	A	01/02/1995
				DE	69419667	D,T	06/04/2000
				DK	630887	T	06/03/2000
				ES	2135543	T	01/11/1999
				FI	942381	A	25/11/1994
				GB	9310713	D	00/00/0000
				GB	9409138	D	00/00/0000
				GR	3030875	T	30/11/1999
				HU	70445	A	30/10/1995
				HU	216845	B	28/09/1999
				HU	221295	B	28/09/2002
				HU	9401543	D	00/00/0000
				HU	9802402	D	00/00/0000
				IL	109734	A	24/09/1998
				IL	120895	A	24/09/1998
				JP	3140294	B	05/03/2001
				JP	6340625	A	13/12/1994
				NO	300325	B	12/05/1997
				NO	941906	A	25/11/1994
				NZ	260566	A	26/07/1996
				RU	2141947	C	27/11/1999
				TW	380135	B	00/00/0000
				US	5654299	A	05/08/1997

INTERNATIONAL SEARCH REPORT

Information on patent family members

30/10/2004

International application No.

PCT/SE 2004/000901

WO	9727185	A1	31/07/1997	AP	9700916 D	00/00/0000
				AT	218563 T	15/06/2002
				AU	692104 B	28/05/1998
				AU	1442297 A	20/08/1997
				AU	5772096 A	29/11/1996
				CA	2240964 A,C	31/07/1997
				DE	69713075 D,T	27/02/2003
				DK	888337 T	01/07/2002
				EP	0825993 A	04/03/1998
				EP	0888337 A,B	07/01/1999
				SE	0888337 T3	
				ES	2175328 T	16/11/2002
				GB	9601202 D	00/00/0000
				HR	970040 A	30/06/1998
				JP	3140063 B	05/03/2001
				JP	11505241 T	18/05/1999
				JP	11505271 T	18/05/1999
				PT	888337 T	30/09/2002
				US	6262075 B	17/07/2001

US	6013652	A	11/01/2000	NONE
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WO	9610568	A1	11/04/1996	AU	702832 B	04/03/1999
				AU	3642995 A	26/04/1996
				CA	2199621 A	11/04/1996
				EP	0783498 A	16/07/1997
				JP	10508297 T	18/08/1998
				US	5607936 A	04/03/1997
